AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) Method for carrying out highly exothermic oxidative reactions in pseudo-isothermal conditions, between reactants fed in continuous flow to a predetermined catalytic bed, characterized in that at least a part of said continuous flow of reactants is fed at different points of said catalytic bed corresponding to different successive stages of the reaction, at respective different predetermined temperatures and flow-rates.

2. (Currently amended) Method for carrying out highly exothermic oxidative reactions in pseudo-isothermal conditions, between reactants fed in a continuous flow to a predetermined catalytic bed ~~(L)~~, in which a plurality of heat exchangers ~~(10)~~ is immersed and supported, ~~characterized in that~~ wherein:

- a plurality of distribution-suppliers ~~(20,22)~~ is positioned in said catalytic bed ~~(L)~~, at different points thereof strictly corresponding to different predetermined stages of said oxidative reaction,

- said continuous flow of reactants is divided into a first part or main flow and a second part or control flow with a predetermined temperature and flow-rate,

- said first part or main flow is preheated through heat exchange with said catalytic bed ~~(L)~~, feeding it through said plurality of exchangers ~~(10)~~,

- said main flow of preheated reactants is recovered and it is fed continuously to said catalytic bed ~~(L)~~, and

- said second part or control flow is fed to said plurality of distribution-suppliers ~~(20, 22)~~ to inject respective fresh flows of reactants at a predetermined temperature and flow-rate into the catalytic bed ~~(L)~~.

3. (Currently amended) Apparatus for carrying out a highly exothermic oxidative reaction in pseudo-isothermal conditions according to the method of claim[[s]] 1 ~~and 2~~, comprising a plurality of heat exchangers ~~(10)~~, ~~characterized in that~~ wherein with each of said exchangers is associated at least one distribution-supplier ~~(20,22)~~ suitable for being fed continuously by a flow a reactants at a predetermined temperature and flow-rate.

4. (Currently amended) Apparatus according to claim 3, ~~characterized in that~~ wherein said at least one distribution-supplier ~~(20,22)~~ is supported fixed by said respective heat exchanger ~~(10)~~.

5. (Currently amended) Apparatus according to claim 4, ~~characterized in that~~ wherein said heat exchanger ~~(10)~~ is plate-shaped and substantially rectangular, inside which a first chamber ~~(18)~~, intended to be crossed by a respective flow of reactants to be preheated, and a second chamber ~~(19)~~, separated fluid-tight from said first chamber ~~(18)~~ and in fluid communication with said at least one distribution-supplier ~~(20,22)~~ are defined.

6. (Currently amended) Apparatus according to claim 5, ~~characterized in that~~ wherein said distribution-supplier ~~(20,22)~~ comprises a carter fixed to a wall of a respective plate-shaped heat exchanger ~~(10)~~, with which it substantially defines a duct in fluid communication, on one side, with said second chamber ~~(19)~~ of the exchanger ~~(10)~~ and, on the other side, with the outside of the exchanger ~~(10)~~ itself, through a plurality of holes formed in said carter.

7. (Currently amended) Reactor for carrying out highly exothermic catalyzed oxidative reactions in pseudo-isothermal conditions, comprising a shell in which is defined a reaction zone at least partially occupied by a catalytic bed ~~(L)~~, ~~characterized in that~~ wherein it comprises an apparatus according to claim[[s]] 3 ~~to 6~~, immersed in said catalytic bed ~~(L)~~.